SEQUENCE LISTING

<110>   Vlaams Interuniversitair Instituut voor Biotechnol

<120>   Novel internal ribosome entry site, vector containing same a
nd the uses thereof

<130>   2676-4976US

<150>   99200216.2
<151>   1999-01-26

<160>   51

<170>   PatentIn version 3.1

<210>   1
<211>   222
<212>   DNA
<213>   Homo sapiens

<400>   1
gacatcagcg acagcgagag gaagaccagc tcggccgagt cctcgtcagc agaatcaggc
   60

tcaggttctg aggaagaaga ggaggaggag gaagaggagg aggaggaagg gagcaccagt
   120

gaagaatcag aggaggaaga ggaagaggag gaggaggaga ccggcagcaa ctctgaggag
   180

gcatcagagc agtctgccga agaagtaagt gaggaagaaa tg
   222

<210>   2
<211>   222
<212>   RNA
<213>   Homo sapiens

<400>   2
gacaucagcg acagcgagag gaagaccagc ucggccgagu ccucgucagc agaaucaggc
   60

ucagguucug aggaagaaga ggaggaggag gaagaggagg aggaggaagg gagcaccagu
   120

gaagaaucag aggaggaaga ggaagaggag gaggaggaga ccggcagcaa cucugaggag

180

gcaucagagc agucugccga agaaguaagu gaggaagaaa ug
   222

<210>   3
<211>   2471
<212>   DNA
<213>   Homo sapiens

<220>
<221>   misc_feature
<222>   (906)..(1128)
<223>   The IRES-activity containing sequence

<220>
<221>   misc_feature
<222>   (1)..(2471)
<223>   PITSLRE protein kinase (p110pitslre) (isoform alfa2-2)

<400>   3
atacaggaag tgacgatact tttggcgcgc gcggttgctg tttcttctct ggctccggga
   60

ccggcggcgg cggcggcggc acgggcggcg gcgtagggtg ttttaactca aatgggtgat
   120

gaaaaggact cttggaaagt gaaaacttta gatgaaattc ttcaggaaaa gaaacgaagg
   180

aaggaacaag aggagaaagc agagataaaa cgcttaaaaa attctgatga ccgggattcc
   240

aagcgggatt cccttgagga gggggagctg agagatcact gcatggagat cacaataagg
   300

aactccccgt atagaagaga agactctatg gaagacagag gagaagaaga tgattctttg
   360

gccatcaaac caccccagca aatgtctcgg aaagaaaag ttcatcacag aaaagatgaa
   420

aagagaaaag agaaaaagca tgctagagtg aagaagaaag aaagagagca cgaacgtcgg
   480

aaacgacatc gagaagaaca ggataaagct cgccgggaat gggaaagaca gaagagaagg
540

gaaatggcaa gggagcattc caggagagaa aggggggaatg atggcgtgtg cctcttcagg
600

gaccgcttgg agcagttaga aaggaagcgg gagcgggagc gcaagatgcg ggagcagcag
660

aaggagcagc gggagcagaa ggagcgcgag cggcgggcgg aggagcggcg caaggagcgg
720

gaggcccgca gggaagtgtc tgcacatcac cgaacgatga gagaggacta cagcgacaaa
780

gtgaaagcca gccactggag tcgcagcccg cctcggccgc cgcgggagcg gttcgagttg
840

ggagacggcc ggaagccagt aaaagaagag aaaatggaag aaagggacct gctgtccgac
900

ttacaggaca tcagcgacag cgagaggaag accagctcgg ccgagtcctc gtcagcagaa
960

tcaggctcag gttctgagga agaagaggag gaggaggaag aggaggagga ggaagggagc
1020

accagtgaag aatcagagga ggaagaggaa gaggaggagg aggagaccgg cagcaactct
1080

gaggaggcat cagagcagtc tgccgaagaa gtaagtgagg aagaaatgag tgaagatgaa
1140

gaacgagaaa atgaaaacca cctcttggtt gttccagagt cacggttcga ccgagattcc
1200

ggggagagtg aagaagcaga ggaagaagtg ggtgagggaa cgccgcagag cagcgccctg
1260

acagagggcg actatgtgcc cgactcccct gccctgtcgc ccatcgagct caagcaggag
1320

ctgcccaagt acctgccggc cctgcagggc tgccggagcg tcgaggagtt ccagtgcctg
1380

aacaggatcg aggagggcac ctatggagtg gtctacagag caaaagacaa gaaaacagat
1440

gaaattgtgg ctctaaagcg gctgaagatg gagaaggaga aggagggctt cccgatcacg
1500

tcgctgaggg agatcaacac catcctcaag gcccagcatc ccaacatcgt caccgttaga
1560

gagattgtgg tgggcagcaa catggacaag atctacatcg tgatgaacta tgtggagcac
1620

gacctcaaga gcctgatgga gaccatgaaa cagcccttcc tgccagggga ggtgaagacc
1680

ctgatgatcc agctgctgcg tggggtgaaa cacctgcacg acaactggat cctgcaccgt
1740

gacctcaaga cgtccaacct gctgctgagc cacgccggca tcctcaaggt gggtgacttc
1800

gggctggcgc gggagtacgg atccctctg aaggcctaca ccccggtcgt ggtgaccctg
1860

tggtaccgcg ccccagagct gctgcttggt gccaaggaat actccacggc cgtggacatg
1920

tggtcagtgg gttgcatctt cggggagctg ctgactcaga agcctctgtt ccccgggaag
1980

tcagaaatcg atcagatcaa caaggtgttc aaggatctgg gaccctag tgagaaaatc
2040

tggcccggct acagcgagct cccagcagtc aagaagatga ccttcagcag acacccctac
2100

aacaacctcc gcaagcgctt cggggctctg ctctcagacc agggcttcga cctcatgaac
2160

aagttcctga cctacttccc cgggaggagg atcagcgctg aggacggcct caagcatgag
2220

tatttccgcg agacccccct ccccatcgac ccctccatgt tccccacgtg gcccgccaag
2280

agcgagcagc agcgtgtgaa gcggggcacc agcccgaggc ccctgagggg aggcctgggc
2340

tacagccagc tgggtgacga cgacctgaag gagacgggct tccaccttac caccacgaac
2400

caggggggcct ctgccgcggg ccccggcttc agcctcaagt tctgaaggtc agagtggacc
     2460

ccgtcatggg g
     2471

<210>   4
<211>   30
<212>   DNA
<213>   Homo sapiens

<400>   4
gacatcagcg acagcgagag gaagaccagc
     30

<210>   5
<211>   468
<212>   DNA
<213>   Homo sapiens

<400>   5
cacgaacgtc ggaaacgaca tcgagaagaa caggataaag ctcgccggga atgggaaaga
     60

cagaagagaa gggaaatggc aagggagcat tccaggagag aaaggggggaa tgatggcgtg
     120

tgcctcttca gggaccgctt ggagcagtta gaaaggaagc gggagcggga gcgcaagatg
     180

cgggagcagc agaaggagca gcgggagcag aaggagcgcg agcggcgggc ggaggagcgg
     240

cgcaaggagc gggaggcccg cagggaagtg tctgcacatc accgaacgat gagagaggac
     300

tacagcgaca aagtgaaagc cagccactgg agtcgcagcc cgcctcggcc gccgcgggag
     360

cggttcgagt tgggagacgg ccggaagcca gtaaaagaag agaaaatgga agaaagggac
     420

ctgctgtccg acttacagga catcagcgac agcgagagga agaccagc
     468

<210> 6
<211> 660
<212> DNA
<213> Homo sapiens

<400> 6
cacgaacgtc ggaaacgaca tcgagaagaa caggataaag ctcgccggga atgggaaaga
    60

cagaagagaa gggaaatggc aagggagcat tccaggagag aaaggggggaa tgatggcgtg
    120

tgcctcttca gggaccgctt ggagcagtta gaaaggaagc gggagcggga gcgcaagatg
    180

cgggagcagc agaaggagca gcgggagcag aaggagcgcg agcggcgggc ggaggagcgg
    240

cgcaaggagc gggaggcccg cagggaagtg tctgcacatc accgaacgat gagagaggac
    300

tacagcgaca aagtgaaagc cagccactgg agtcgcagcc cgcctcggcc gccgcgggag
    360

cggttcgagt tgggagacgg ccggaagcca gtaaaagaag agaaaatgga agaaagggac
    420

ctgctgtccg acttacagga catcagcgac agcgagagga agaccagctc ggccgagtcc
    480

tcgtcagcag aatcaggctc aggttctgag gaagaagagg aggaggagga gagaggaggag
    540

gaggaaggga gcaccagtga agaatcagag gaggaagagg aagaggagga ggaggagacc
    600

ggcagcaact ctgaggaggc atcagagcag tctgccgaag aagtaagtga ggaagaaatg
    660

<210> 7
<211> 38
<212> DNA
<213> Artificial Sequence

<220>
<223> 5' primer

<400> 7
tgctctagag gaattcgaag tgacgatact tttggcgc
    38

<210> 8
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> 3' primer

<400> 8
tgctctagac caagcttcac gtccatcaag ccgacctcag aa
    42

<210> 9
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> in frame NotI

<400> 9
agcctcaagt tcgcggccgc agagtggacc
    30

<210> 10
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 10
gaggaagaag cgagtgaaga t
    21

<210> 11
<211> 22
<212> DNA
<213> Artificial Sequence

```
<220>
<223>  primer

<400>  11
gacagcgaga aagaccagct cg
    22



<210>  12
<211>  35
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  5'-end primer

<400>  12
ctagtctaga aaagtgaaaa ctttagatga aattc
    35



<210>  13
<211>  34
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  3'-end primer

<400>  13
tgcatgccat ggatgtcgtt tccgacgttc gtgc
    34



<210>  14
<211>  35
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  3'-end primer

<400>  14
tgcatgccat ggtcctctct catcgttcgg tgatg
    35
```

<210> 15
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> 5'-end primer

<400> 15
gcacgaacgt cggaaacgac atctagacta g
    31

<210> 16
<211> 35
<212> DNA
<213> Artificial Sequence

<220>
<223> 5'-end primer antisense

<400> 16
catgccatgg tcttcctctc gctgtcgctg atgtc
    35

<210> 17
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> 5'-end primer sense

<400> 17
ctagtctaga catcaccgaa cgatgagaga gg
    32

<210> 18
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> 5'-end primer sense

<400> 18

gacatcagcg acagcgagag gaagaccagc tctagactag
    40

<210>   19
<211>   26
<212>   DNA
<213>   Artificial Sequence

<220>
<223>   double-stranded oligonucleotide

<400>   19
cgcgtggcga gattttcagg agtcac
    26

<210>   20
<211>   26
<212>   DNA
<213>   Artificial Sequence

<220>
<223>   double-stranded oligonucleotide

<400>   20
tcgagtgact cctgaaaatc tcgcca
    26

<210>   21
<211>   40
<212>   DNA
<213>   Artificial Sequence

<220>
<223>   E-tag probe

<400>   21
acgcggttcc agcggatccg gatacggctc cggcgcacct
    40

<210>   22
<211>   8
<212>   RNA
<213>   Artificial Sequence

<220>
<223> primer

<400> 22
crccaugg
      8

<210> 23
<211> 9
<212> RNA
<213> Artificial Sequence

<220>
<223> primer

<400> 23
cucaaaugg
      9

<210> 24
<211> 9
<212> RNA
<213> Artificial Sequence

<220>
<223> primer

<400> 24
gggugauga
      9

<210> 25
<211> 9
<212> RNA
<213> Artificial Sequence

<220>
<223> primer

<400> 25
uuuagauga
      9

<210> 26

<211> 9
<212> RNA
<213> Artificial Sequence

<220>
<223> primer

<400> 26
uucugauga
     9

<210> 27
<211> 9
<212> RNA
<213> Artificial Sequence

<220>
<223> primer

<400> 27
acugcaugg
     9

<210> 28
<211> 9
<212> RNA
<213> Artificial Sequence

<220>
<223> primer

<400> 28
acucuaugg
     9

<210> 29
<211> 9
<212> RNA
<213> Artificial Sequence

<220>
<223> primer

<400> 29
agaagauga

9

```
<210>   30
<211>   9
<212>   RNA
<213>   Artificial Sequence

<220>
<223>   primer

<400>   30
agcaaaugu
        9


<210>   31
<211>   9
<212>   RNA
<213>   Artificial Sequence

<220>
<223>   primer

<400>   31
aaaagauga
        9


<210>   32
<211>   9
<212>   RNA
<213>   Artificial Sequence

<220>
<223>   primer

<400>   32
aaagcaugc
        9


<210>   33
<211>   9
<212>   RNA
<213>   Artificial Sequence

<220>
```

<223> primer

<400> 33
cgggaaugg   9

<210> 34
<211> 9
<212> RNA
<213> Artificial Sequence

<220>
<223> primer

<400> 34
gggaaaugg   9

<210> 35
<211> 9
<212> RNA
<213> Artificial Sequence

<220>
<223> primer

<400> 35
ggggaauga   9

<210> 36
<211> 9
<212> RNA
<213> Artificial Sequence

<220>
<223> primer

<400> 36
gaaugaugg   9

<210> 37
<211> 9

<212> RNA
<213> Artificial Sequence

<220>
<223> primer

<400> 37
gcaagaugc
9

<210> 38
<211> 9
<212> RNA
<213> Artificial Sequence

<220>
<223> primer

<400> 38
gaacgauga
9

<210> 39
<211> 9
<212> RNA
<213> Artificial Sequence

<220>
<223> primer

<400> 39
agaaaaugg
9

<210> 40
<211> 9
<212> RNA
<213> Artificial Sequence

<220>
<223> primer

<400> 40
aagaaauga
9

<210> 41
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 41
tgaccggaat tcatgggtga tgaaaaggac tcttgg
    36

<210> 42
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 42
tgaccggaat tctgaccttc agaacttgag gctgaagcc
    39

<210> 43
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 43
agcctcaagt tcgcggccgc agagtggacc
    30

<210> 44
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 44
gaggaagaag cgagtgaaga t
    21

<210> 45
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 45
gacagcgaga aagaccagct cg
    22

<210> 46
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 46
ttcttcatct tcacccatgg cttcctcact tac
    33

<210> 47
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 47
ctagtctaga gcacgaacgt cggaaacgac a
    31

<210> 48
<211> 40
<212> DNA

<213>   Artificial Sequence

<220>
<223>   primer

<400>   48
ctagtctaga gacatcagcg acagcgagag gaagaccagc
    40

<210>   49
<211>   35
<212>   DNA
<213>   Artificial Sequence

<220>
<223>   primer

<400>   49
ccatcgatag aacctgagcc tgattctgct gacga
    35

<210>   50
<211>   34
<212>   DNA
<213>   Artificial Sequence

<220>
<223>   primer

<400>   50
ccatcgatac cggcagcaac tctgaggagg catc
    34

<210>   51
<211>   33
<212>   DNA
<213>   Artificial Sequence

<220>
<223>   primer

<400>   51
ttcttcatct tcacccatgg cttcctcact tac
    33